LIQUID EFFLUENT

Test Area North/Technical Support Facility (TAN/TSF) Sewage Treatment Plant (STP) Results for 2004

The WLAP for TAN/TSF STP (LA-000153-01) requires that the effluent (TAN-655) be sampled monthly for the following parameters:

TAN/TSF Effluent (TAN-655)	
Daily flow	Total coliform
Total Kjeldahl nitrogen	Fecal coliform
Nitrate + nitrite as nitrogen	Chromium
Biochemical oxygen demand	Fluoride
Total phosphorus	Lead
Total dissolved solids	Iron
Total suspended solids	Manganese
Ammonium as nitrogen	Mercury
Chloride	Selenium
Arsenic	Sodium
Silver	Sulfate
Barium	Zinc

The permit for the TAN/TSF STP effluent (TAN-655) sets concentration limits for total nitrogen at 20 mg/L and total suspended solids (TSS) at 100 mg/L. Total nitrogen is calculated from the reported total Kjeldahl nitrogen and nitrate + nitrate as nitrogen results. The permit specifies a flow limit of 34 million gallons/permit year. For the TAN/TSF STP, the permit year runs from November 1 through October 31. The total permit year flow measured by the flow meter was approximately 12.76 million gallons.

During the first quarter of 2004:

- All permit-required parameters for the effluent (TAN-655) were within historical ranges.
- The effluent flow meter was inoperable for a short period in January and again in March. Maintenance activities removed obstructions, and the flow meter was put back in service.
- There were no permit noncompliances.

During the second quarter of 2004:

- All permit-required parameters for the effluent (TAN-655) were within historical ranges.
- There were no permit noncompliances.

During the third quarter of 2004:

- All permit-required parameters for the effluent (TAN-655) were within historical ranges.
- There were no permit noncompliances.

During the fourth quarter of 2004:

- A historical high was reported for the October 204 iron concentration and December 2004 biochemical oxygen demand concentration.
- The total suspended solids concentration for December 2004 exceeded the 100-mg/L permit limit.

The following graphs present results of sampling performed since 2003 for those parameters with set concentration limits.

FOR MORE INFORMATION

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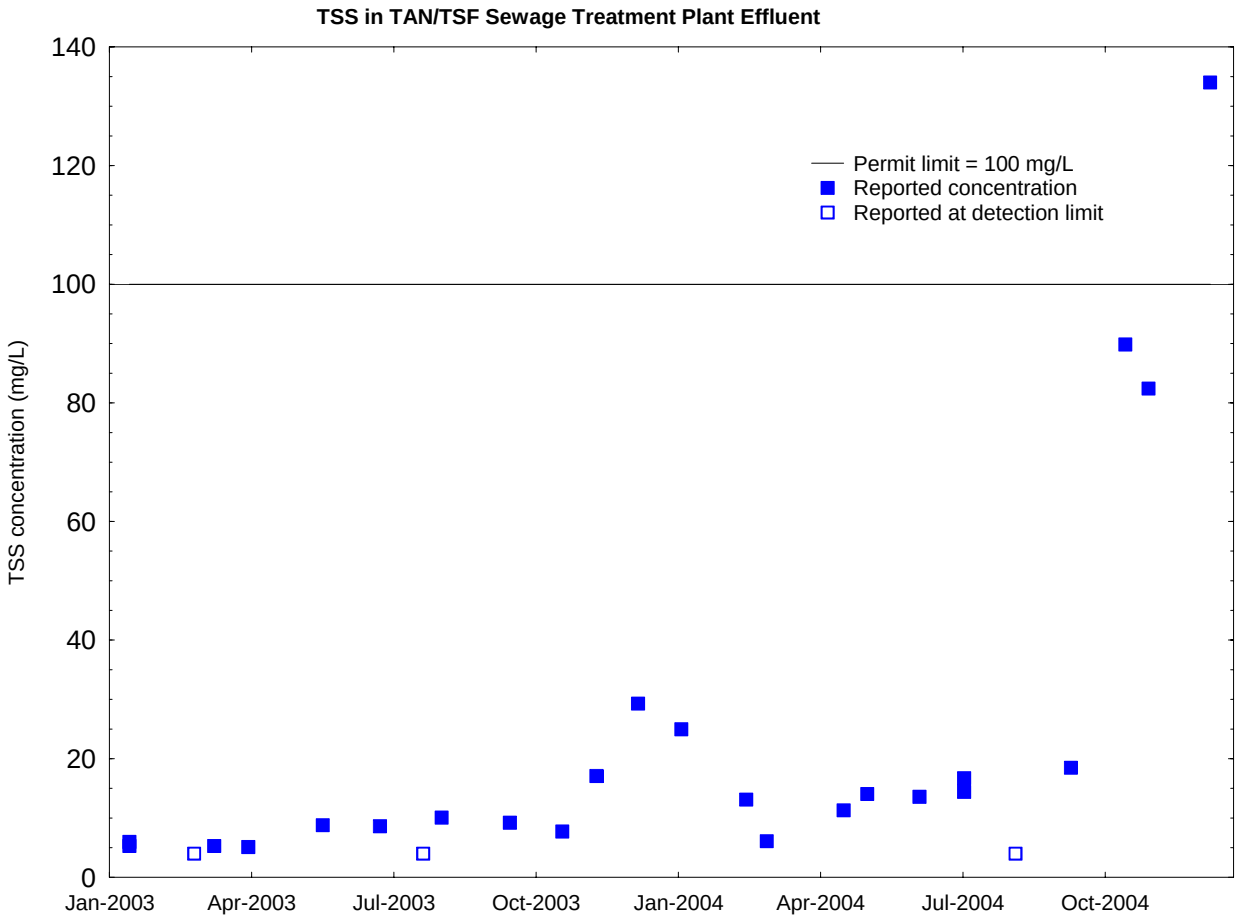
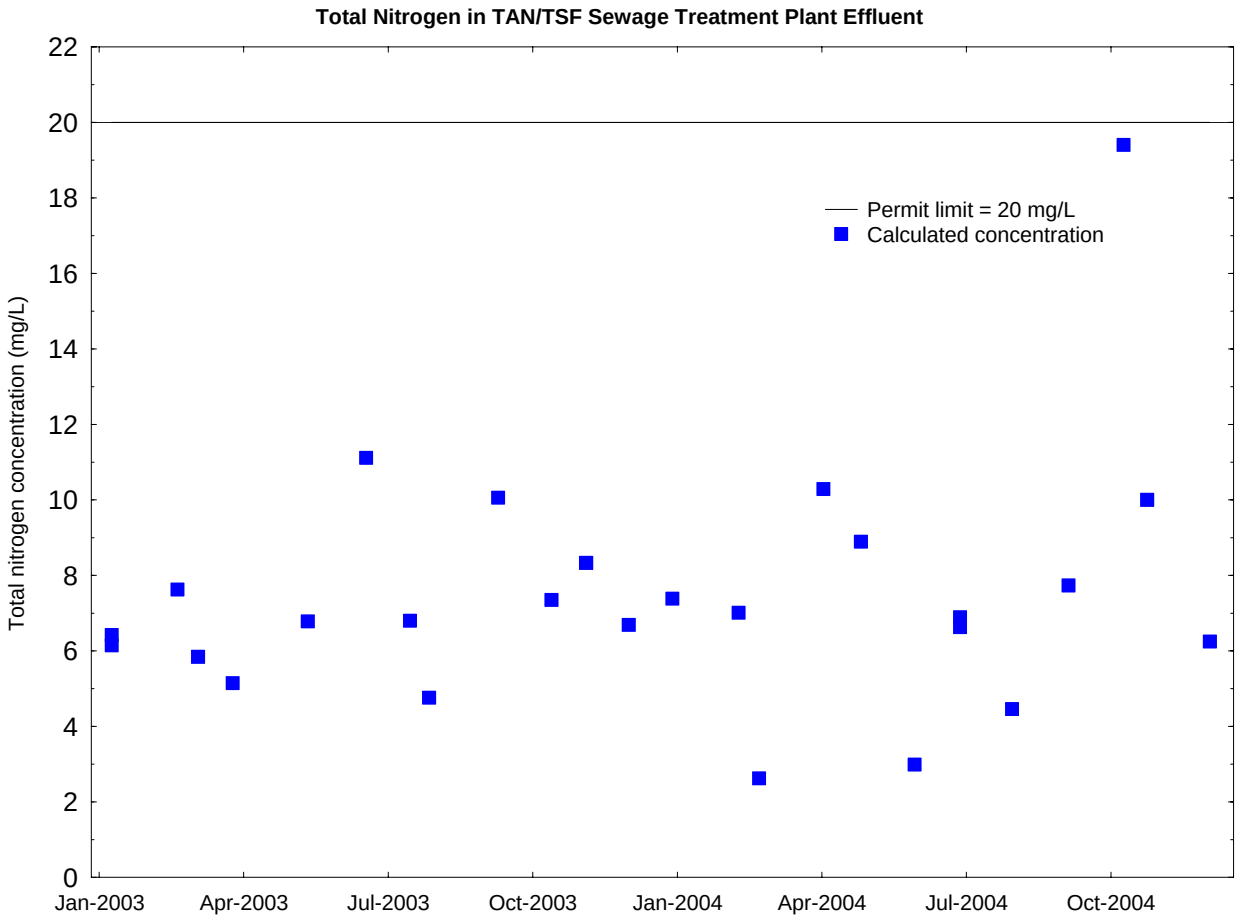

TSS in TAN/TSF Sewage Treatment Plant Effluent
TSS concentration (mg/L)
140
120
100
80
60
40
20
0
Permit limit = 100 mg/L
Reported concentration
Reported at detection limit
Jan-2003
Apr-2003
Jul-2003
Oct-2003
Jan-2004
Apr-2004
Jul-2004
Oct-2004


Total Nitrogen in TAN/TSF Sewage Treatment Plant Effluent
Total nitrogen concentration (mg/L)
0
2
4
6
8
10
12
14
16
18
20
22
Jan-2003
Apr-2003
Jul-2003
Oct-2003
Jan-2004
Apr-2004
Jul-2004
Oct-2004
Permit limit = 20 mg/L
Calculated concentration